



1644  
IFC  
ATTORNEY DOCKET NO. 21099.0074U2  
PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of )  
 )  
 Meagher et al. ) Art Unit: 1644  
 )  
 Application No. 10/079,130 ) Examiner: Unassigned  
 )  
 Filing Date: February 20, 2002 ) Confirmation No. 6995  
 )  
 For: RAPID PRODUCTION OF )  
 MONOCLONAL ANTIBODIES )

**INFORMATION DISCLOSURE STATEMENT**

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

NEEDLE & ROSENBERG, P.C.  
Customer Number 23859

Sir:

Pursuant to the requirements of 37 C.F.R. § 1.56, submitted herewith on the accompanying Form PTO 1449 is a listing of documents known to Applicants and/or their attorneys. A copy of each of these documents is enclosed.

This Information Disclosure Statement is believed to be filed in a timely manner pursuant to 37 C.F.R. § 1.97(b)(3), in that a first Office Action on the merits of the present patent application has not yet been mailed to Applicants.

Consideration of the cited documents and making the same of record in the prosecution of the above-referenced application are respectfully requested.

ATTORNEY DOCKET NO. 21099.0074U2  
Application No. 10/079,130

No fee is believed due; however, the Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 14-0629.

Respectfully submitted,

NEEDLE & ROSENBERG, P.C.



Lizette M. Fernandez, Ph.D.  
Registration No. 46,694

NEEDLE & ROSENBERG, P.C.  
Customer Number 23859  
(678) 420-9300  
(678) 420-9301 (fax)

**CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8**

I hereby certify that this correspondence, including any items indicated as attached or included, is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date indicated below.



Lizette M. Fernandez

Date

6/22/04



Form PTO-1449 U.S. DEPARTMENT OF COMMERCE (Rev. 7-80) PATENT AND TRADEMARK OFFICE  <b>LIST OF INFORMATION CITED BY APPLICANT</b> (Use several sheets if necessary)	ATTORNEY DOCKET NO.: 21099.0074U2		SERIAL NO. 10/079,130	
	APPLICANT: Meagher et al.			
	FILING DATE: February 20, 2002		GROUP: Unassigned	

**U.S. PATENT DOCUMENTS**

EXAMINER INITIALS		DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	A1	4,978,625	12/18/90	Wagner et al.			
	A2	5,212,072	05/18/93	Blalock et al.			
	A3	5,264,341	11/23/93	Maciak			
	A4	5,627,052	05/06/97	Schrader			

**FOREIGN PATENT DOCUMENTS**

	A5	DE19900635	07/13/00	Moldenhauer et al., Germany with Abstract			
--	----	------------	----------	---	--	--	--

**OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)**

	A6	Antczak D.F. "Monoclonal antibodies: technology and potential use" <i>J Am Vet Med Assoc</i> 181, 1005-10, 1982					
	A7	Condon et al. "Aberrant trafficking of the B cell receptor Ig-alpha beta subunit in a B lymphoma cell line" <i>J Immunol</i> 165, 1427-37, 2000					
	A8	Coursen et al. "Genomic instability and telomerase activity in human bronchial epithelial cells during immortalization by human papillomavirus-16 E6 and E7 genes" <i>Exp Cell Res</i> 235, 245-53, 1997					
	A9	DeFranco et al. "Structure and Function of the B-Cell Antigen Receptor" <i>Chem Immunol</i> . 59:156-172, 1994					
	A10	Dickson et al. "Human keratinocytes that express hTERT and also bypass a p16(INK4a)-enforced mechanism that limits life span become immortal yet retain normal growth and differentiation characteristics" <i>Mol Cell Biol</i> 20(4):1436-47, 2000					
	A11	Edwards-Gilbert, G. and Milcarek, C. "The binding of a subunit of the general polyadenylation factor cleavage polyadenylation specificity factor CPSF) to polyadenylation sites changes during B cell development" <i>Nucleic Acids Symposium Series</i> 33, 229-233, 1995					
	A12	Edwards-Gilbert, G. and Milcarek, C. "Regulation of poly(A) site use during mouse B-cell development involves a change in the binding of a general polyadenylation factor in a B-cell stage-specific manner" <i>Molecular and Cellular Biology</i> 15, 6420-6429, 1995					
	A13	Edwards-Gilbert et al. "Alternative poly(A) site selection in complex transcription units: means to an end?" <i>Nucleic Acids Res</i> 25, 2547-2561, 1997					
	A14	Flaspohler et al. "The 3'-untranslated region of membrane exon 2 from the gamma 2a immunoglobulin gene contributes to efficient transcription termination" <i>Journal of Biological Chemistry</i> 270, 11903-11, 1995					
	A15	Flaspohler, J. A. and Milcarek, C. "Myelomas and lymphomas expressing the IgY2a H chain gene have similar transcription termination regions" <i>Journal of Immunology</i> 144, 2802-2810, 1990					
	A16	Flaswinkel and Reth, "Molecular cloning of the Ig- $\alpha$ subunit of the human B-cell antigen receptor complex." <i>Immunogenetics</i> 36:266-269, 1992					



A17	Flaswinkel and Reth, "Dual role of the tyrosine activation motif of the Ig- $\alpha$ protein during signal transduction via the B cell antigen receptor. <i>The EMBO Journal</i> 13(1):83-89, 1994
A18	Fraser, C.M. and Venter, J.C. "Monoclonal antibodies to beta-adrenergic receptors: use in purification and molecular characterization of beta receptors" <i>Proc Natl Acad Sci</i> 77, 7034-8, 1980
A19	Galli et al. "Relative position and strengths of poly(A) sites as well as transcription termination are critical to membrane vs secreted mu-chain expression during B-cell development" <i>Genes &amp; Dev</i> 1, 471-481, 1987
A20	Genovese et al. "Differential mRNA stabilities affect mRNA levels in mutant mouse myeloma cells" <i>Somat Cell Mol Genet</i> 17, 69-81, 1991
A21	Genovese C. and Milcarek, C. "Increased half-life of mu immunoglobulin mRNA during mouse B cell development increases its abundance" <i>Mol Immunol</i> 27, 733-43, 1990
A22	Glennie, M.J. and Johnson, P.W. "Clinical trials of antibody therapy" <i>Immunol Today</i> 21, 403-10, 2000
A23	Glennie, M.J. and van de Winkel, Jan G.J. "Renaissance of cancer therapeutic antibodies." <i>DDT</i> 8(11):503-510, 2003
A24	Gold and Matsuuchi, "Signal Transduction by the Antigen Receptors of B and T Lymphocytes" <i>International Review of Cytology</i> 157:181-276, 1995
A25	Graziano and Fanger "Fc $\gamma$ RI and Fc $\gamma$ RII on Monocytes and Granulocytes are Cytotoxic Trigger Molecules for Tumor Cells" <i>J. of Immun.</i> 139: 3536-3541, 1987
A26	Green, Larry L. "Antibody engineering via genetic engineering of the mouse: XenoMouse strains are a vehicle for the facile generation of therapeutic human monoclonal antibodies." <i>J. Immuno. Methods</i> 231:11-23, 1999
A27	Greenberg et al. "Telomerase reverse transcriptase gene is a direct target of c-Myc but is not functionally equivalent in cellular transformation" <i>Oncogene</i> 18, 1219-26, 1999
A28	Greene et al. "Monoclonal antibodies to human estrogen receptor" <i>Proc Natl Acad Sci U S A</i> 77, 5115-9, 1980
A29	Guise et al. "Alternative expression of secreted and membrane forms of immunoglobulin $\mu$ -chain is regulated by transcriptional termination in stable plasmacytoma transfectants" <i>Journal of Immunology</i> 140, 3988-3994, 1988
A30	Hall, B. L. and Milcarek, C. "Sequence and polyadenylation site determination of murine immunoglobulin gamma 2a membrane 3' untranslated region" <i>Mol Immunol</i> 26, 819-826, 1989.
A31	Hashimoto et al. "Alternative splicing of CD79a (Ig-alpha/mb-1) and CD79b (Ig-beta/B29) RNA transcripts in human B cells" <i>Mol Immunol</i> 32, 651-9, 1995
A32	Hattori et al. "The DNA sequence of human chromosome 21. The chromosome 21 mapping and sequencing consortium" <i>Nature</i> 405, 311-9, 2000
A34	Hombach et al. "Identification of the genes encoding the IgM-alpha and Ig-beta components of the IgM antigen receptor complex by amino-terminal sequencing" <i>Eur J Immunol</i> 20, 2795-9, 1990
A35	Hombach et al. "Molecular components of the B-cell antigen receptor complex of the IgM class" <i>Nature</i> 343, 760-2, 1990
A36	Hurwitz et al. "C $_H$ gene rearrangements in IgM-bearing B cells and in the normal splenic DNA component of hybridomas making different isotypes of antibody" <i>Cell</i> 22, 349-59, 1980
A37	Kanavaros et al. "Discordant expression of immunoglobulin and its associated molecule mb-1/CD79a is frequently found in mediastinal large B cell lymphomas" <i>Am J Pathol</i> 146, 735-41, 1995
A38	Kandasamy et al. "The late pollen specific actins in angiosperms" <i>Plant J</i> 18, 681-691, 1999
A39	Kelly, D. E., and Perry, R. P. "Transcriptional and post-transcriptional control of Ig mRNA production during B lymphocyte development" <i>Nucleic Acids Research</i> 14, 5431-5441, 1986
A40	Kim et al. "Immortalization of human embryonic fibroblasts by overexpression of c- myc and simian virus 40 large T antigen" <i>Exp Mol Med</i> 33, 293-8, 2001



A41	Kim et al. "Differential signaling through the Ig- $\alpha$ and Ig- $\beta$ components of the B cell antigen receptor" <i>Mol. Immunol.</i> 23: 911-916, 1993
A42	Kiyono et al. "Both Rb/p16 <sup>INK4a</sup> inactivation and telomerase activity are required to immortalize human epithelial cells" <i>Nature</i> 396, 84-8, 1998
A43	Kobrin, B. J. et al. Sequences near the 3' secretion-specific polyadenylation site influence levels of secretion-specific and membrane-specific IgG2b mRNA in myeloma cells" <i>Molecular and Cellular Biology</i> 6, 1687-1697, 1986
A44	Kohler, G., and Milstein, C. "Continuous cultures of fused cells secreting antibody of predefined specificity" <i>Nature</i> 256, 495, 1975
A45	Kohler and Milstein. "Derivation of specific antibody-producing tissue culture and tumor lines by cell fusion." <i>Eur. J. Immunol.</i> 6:495-497. (1975)
A46	Kraus et al. "Ig- $\alpha$ Cytoplasmic Truncation Renders Immature B Cell More Sensitive to Antigen Contact," <i>Immunity</i> 11:537-545, 1999
A47	Laird et al. "50 million years of chordate evolution: Seeking the origins of adaptive immunity." <i>PNAS</i> 97(13):6924-6926, 2000
A48	Lassman, C. R., and Milcarek, C. "Regulated expression of the mouse $\gamma$ 2b Ig H chain gene is influenced by polyA site order and strength" <i>J Immunol</i> 148(8), 2578-2585, 1992
A49	Lassman et al. "Plasma cell-regulated polyadenylation at the Ig gamma 2b secretion-specific poly(A) site" <i>J Immunol</i> 148, 1251-60, 1992.
A50	Lebman et al. "Regulation of usage of membrane and secreted 3' termini of alpha mRNA differs from mu mRNA" <i>Journal of Immunology</i> 148, 3282-3289, 1992
A51	Leno et al. "IgG Production in Hybridoma Batch Culture: Kinetics of IgG mRNA, Cytoplasmic-, Secreted- and Membrane-Bound Antibody Levels" <i>Journal of Biotechnology</i> 20: 301-312, 1991
A52	Li et al. "Rapid isolation of monoclonal antibodies: monitoring enzymes in the phytochelatin synthesis pathway" <i>Plant Physiol</i> 711-719(2001)
A53	Li et al. "Genetic diversity of the human immunoglobulin heavy chain V <sub>H</sub> region." <i>Immunological Reviews</i> 190:53-68, 2002
A54	Lockhart, D.J. and Winzeler, E.A. "Genomics, gene expression and DNA arrays" <i>Nature</i> 405, 827-36, 2000
A55	MacBeath, G. and Schreiber, S.L. "Printing proteins as microarrays for high-throughput function determination" <i>Science</i> 289, 1760-3, 2000
A56	Matis et al. "B-lineage regulated polyadenylation occurs on weak poly(A) sites regardless of sequence composition at the cleavage and downstream regions" <i>Nucleic Acids Res</i> 24, 4684-92, 1996
A57	Matsuuchi et al. "The membrane IgM-associated proteins MB-1 and Ig- $\beta$ are sufficient to promote surface expression of a partially functional B-cell antigen receptor in a nonlymphoid cell line" <i>Proc. Natl. Acad. Sci. USA</i> 89:3404-3408, 1992
A58	McKinney et al. "Optimizing antibody production in batch hybridoma cell culture" <i>Journal of Biotechnology</i> 40: 31-48, 1995
A59	Meilhoc et al. "Application of flow cytometric measurement of surface IgG in kinetic analysis of monoclonal antibody synthesis and secretion by murine hybridoma cells" <i>J Immunol Methods</i> 121, 167-174, 1989
A60	Milcarek, C., and Hall, B. "Cell-specific expression of secreted versus membrane forms of immunoglobulin gamma 2b mRNA involves selective use of alternate polyadenylation sites" <i>Mol Cell Biol</i> 5, 2514-2520, 1985
A61	Milcarek et al. "Changes in abundance of IgG 2a mRNA in the nucleus and cytoplasm of a murine B-lymphoma before and after fusion to a myeloma cell" <i>Mol Immunol</i> 33, 691-701, 1996
A62	Milcarek et al. "The Metabolism of a Poly(a) Minus mRNA Fraction in LeLa Cells." <i>Cell</i> 3:1-10, 1974



A63	Miller et al. "Treatment of B-cell lymphoma with monoclonal anti-idiotype antibody." <i>N Engl J Med</i> 306, 517-22, 1982
A64	Milstein, C. "With the benefit of hindsight" <i>Immunol Today</i> 21, 359-64, 2000
A65	Milstein, C. "The hybridoma revolution: an offshoot of basic research." <i>BioEssay</i> 21:966-973, 1999
A66	Morio et al. "The <i>Dictyostelium</i> developmental cDNA project: generation and analysis of expressed sequence tags from the first-finger stage of development" <i>DNA Res</i> 5, 335-40, 1998
A67	Munn et al. "Role of Low-Affinity Fc Receptors in Antibody-Dependent Tumor Cell Phagocytosis by Human Monocyte-Derived Macrophages" <i>Cancer Res</i> . 51: 1117-1123, 1991
A68	Nygren and Uhlen. "Scaffolds for engineering novel binding sites in proteins." <i>Engineering and Design</i> 7:463-469, 1997
A69	O'Reilly et al. "Rapid hybridoma screening method for the identification of monoclonal antibodies to low-abundance cytoplasmic proteins" <i>Biotechniques</i> 25, 824-30, 1998
A70	Oi et al. "Immunoglobulin gene expression in transformed lymphoid cells" <i>Proc Natl Acad Sci U S A</i> 80, 825-9, 1983
A71	Opitz et al. "Cyclin D1 overexpression and p53 inactivation immortalize primary oral keratinocytes by a telomerase-independent mechanism" <i>J Clin Invest</i> 108, 725-32, 2001
A72	Ozturk and Palsson : "Loss of Antibody Productivity During Long-Term Cultivation of a Hybridoma Cell Line in Low Serum and Serum-Free Media" <i>Hybridoma</i> 9: 167-175, 1990
A73	Pandey, A., and Mann, M. "Proteomics to study genes and genomes" <i>Nature</i> 405, 837-46, 2000
A74	Pandey et al. "Analysis of receptor signaling pathways by mass spectrometry: identification of vav-2 as a substrate of the epidermal and platelet-derived growth factor receptors" <i>Proc Natl Acad Sci U S A</i> 97, 179-84, 2000
A75	Papavasiliou et al. "The Cytoplasmic Domains of Immunoglobulin (Ig) $\alpha$ and Ig $\beta$ Can Independently Induce the Precursor B Cell Transition and Allelic Exclusion," <i>J. Exp. Med</i> 182:1389-1393, 1995
A76	Parks et al. "Antigen-specific identification and cloning of hybridomas with a fluorescence-activated cell sorter" <i>Proc Natl Acad Sci U S A</i> 76, 1962-6, 1979
A77	Pelanda et al. "B Cell Progenitors Are Arrested in Maturatin but Have Intact VDJ Recombination in the Absence of Ig- $\alpha$ and Ig- $\beta^1$ ." <i>J. of Immun</i> 169:865-872, 2002
A78	Persidis, A. "Proteomics" <i>Nat Biotechnol</i> 16, 393-4, 1998
A79	Phillips et al. "Regulation of nuclear poly(A) addition controls the expression of immunoglobulin M secretory mRNA" <i>The EMBO Journal</i> 20(22):6443-6452, 2001
A80	Rapp et al. "The Use of the Flourescent-Activated Cell Sorter to Monitor Changes in Cell-Specific Productivity and its Application to Large Scale Culture" <i>Advances in Animal Cell Biology and Technology for BioProcesses</i> , 129-133, 1989
A81	Reichlin et al. "B Cell Development is Arrested at the Immature B Cell State in Mice Carrying a Mutation in the Cytoplasmic Domain of Immunoglobin b. <i>J. Exp. Med.</i> 01, 193(1):13-23, Jan. 2001
A82	Reth et al. "An unsolved problem of the clonal selection theory and the model of an oligomeric B-cell antigen receptor" <i>Immunol. Rev.</i> 176: 10-18, 2000
A83	Reth et al. "The B-cell antigen receptor complex." <i>Immun Today</i> 12(6):196-201, 1991
A84	Reth, Michael "Antigen Receptors on B Lymphocytes." <i>Annu. Rev. Immunol.</i> 10:97-121, 1992
A85	Richards et al. "Reconstitution of B cell antigen receptor-induced signaling events in a nonlymphoid cell line by expressing the Syk protein-tyrosine kinase" <i>J Biol Chem</i> 271, 6458-66, 1996
A86	Russo et al. "A telomere-independent senescence mechanism is the sole barrier to Syrian hamster cell immortalization" <i>Oncogene</i> 17, 3417-26, 1998
A87	Sakaguchi et al. "B lymphocyte lineage-restricted expression of mb-1, a gene with CD3-like structural properties" <i>Embo J</i> 7, 3457-64, 1988



A88	Schamel and Reth, "Stability of the B cell antigen receptor complex." <i>Molecular Immunology</i> 37:253-259, 2000
A89	Schildbach et al. "Contribution of a single heavy chain residue to specificity of an anti-digoxin monoclonal antibody" <i>Protein Science</i> 3:737-749, 1994
A90	Stevens et al. "A Mutation of the $\mu$ Transmembrane that Disrupts Endoplasmic Reticulum Retention," <i>J. Immunol.</i> 153:4397-4406, 1994
A91	Sun et al. "Transfectomas expressing both secreted and membrane-bound forms of chimeric IgE with anti-viral specificity" <i>J. Immunol.</i> 146, 199-205, 1991
A92	Syrigos et al. "Use of monoclonal antibodies for the diagnosis and treatment of bladder cancer" <i>Hybridoma</i> 18, 219-224, 1999
A93	Torris et al. "Aberrant B Cell Development and Immune Response in Mice with a Compromised BCR Complex." <i>Science</i> 272(5269):1804-1808, 1996
A94	Wang and Clark, "Ig $\alpha$ : B all that you can B," <i>J. Clin Invest.</i> 104(8):1011-1012, 1999
A95	Weiser et al. "The internalization of the IgG2a antigen receptor does not require the association with Ig- $\alpha$ and Ig- $\beta$ but the activation of protein tyrosine kinases does." <i>Eur. J. Immunol.</i> 24:665-671, 1994
A96	Wienands et al. "Molecular components of the B cell antigen receptor complex of class IgD differ partly from those of IgM" <i>EMBO Journal</i> 9: 449-456, 1990
A97	Yuan, D., and Tucker, P. W. "Transcriptional regulation of the mu-delta heavy chain locus in normal murine B-lymphocytes" <i>J. Exp. Medicine</i> 160, 564-572, 1984.

EXAMINER:

DATE CONSIDERED:

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.